PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicants: S. J. Vornsand	)
Serial No.: 09/852,883	)
Filed: May 11, 2001	)
For: **CLOSED LOOP TELEVISION CONTROL SYSTEM**	)
Group Art Unit: 2622	)
Examiner: B. P. Yenke	)
Attorney Docket No.: 7187	)
Confirmation No.: 5408	)

APPELLANT'S BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 C.F.R. §41.39, Appellants submit the following brief.

1. Real Party in Interest

The real party in interest is Zenith Electronics Corporation of Lincolnshire, IL.

2. Related Appeals and Interferences

There are no prior or pending appeals, interferences or judicial proceedings known to Appellant, Appellant's legal representatives or assignee which may be related to, directly affect or be affected by or have a bearing on the Board's decision in the pending appeal.

3. Status of Claims

Claims 31-47 are rejected and are appealed. Claims 1-30 and 48-51 are canceled.

4. Status of Amendments

All amendments submitted prior to this brief have been entered.

5. Summary of Claimed Subject Matter

As disclosed on page 5, line 19 through page 6, line 5 and as shown in Figure 1 of the present application, a television system 20 includes a single host device 24 that controls a plurality of dispersed televisions 22 in response to input signals or request signals. The host device 24 ensures that each of the dispersed televisions 22 has successfully completed a function after it has been commanded to do so. In other words, the host device 24 determines which of the televisions 22 fails to perform the function because those televisions 22 which fail to perform the function also fail to transmit a confirmation signal.

As disclosed on page 7, line 1 through page 8, line 6 and as shown in Figure 2 of the present application, the host device 24 a host processor 64, a host receiver 62, and a host transmitter 60. The host

receiver 62 receives input or request signals 66, such as those generated by a remote control unit 44, or switches 28 and 30 (Figure 1), or peripheral devices 32 (Figure 1). The host transmitter 60 generates and transmits command signals 68 to control each of the dispersed televisions 22. After the command signals 68 are successfully received by each of the dispersed televisions 22, and after the dispersed televisions 22 successfully perform the functions dictated by the command signals 68, each of the dispersed televisions 22 transmits a confirmation signal 70. The host receiver 62 of the host device 24 receives the confirmation signal 70. The host device 24, therefore, is assured that a prior function has been successfully accomplished by the dispersed televisions 22 before the host device 24 proceeds to command further functions to be performed by the dispersed televisions 22.

Page 8, line 7 through page 9, line 7 and shown in Figure 3 of the present application disclose the operation of the host device 24. The host receiver 62 of the host device 24 receives the request signal 66 at 72. Once the request signal 66 is received, the host processor 64 confirms at 74 whether the confirmation signal 70 has been received from each television 22 responsive to a previous request signal 66. If the confirmation signals 70 have not been received, the host processor 64 generates an error signal at 75. The error signal apprises the user of the situation, whereupon the user can take corrective action at 76. However, if the confirmation signals 70 have been received, the host processor 64 generates and transmits the command signal 68 to each of the televisions 22 at 77.

As disclosed on page 7, lines 1 through 12 and shown in Figure 2 of the present application, each of the dispersed televisions 22 includes a television processor 46, a television receiver 58, and a television transmitter 56.

As disclosed on page 9, line 8 through page 10, line 13 and shown in Figure 4 of the present application, each of the televisions 22 begins by receiving the command signal 68 at 78. The televisions 22 attempt to perform the commanded function at 80. Those televisions 22 that did not perform the commanded function as determined at 81 generate no confirmation signal as indicated at 82. In this case, the host device 24 may resend the command or take other appropriate action as indicated at 76 of Figure 3. The television processor 46 of each of the televisions 22 that is able to successfully perform the television function commanded, generates the confirmation signals 70 as indicated at 86. Each of the relevant television processors 46 delays transmission of the confirmation signal 70 for a predetermined period of time, as indicated at 88. The television processors 46 then transmit the confirmation signals 70 at 90.

6. Grounds of Rejection to be Reviewed on Appeal

Whether claims 31-47 are unpatentable under 35 U.S.C. §103(a) over U.S. Patent No. 6,753,790 (hereinafter, "Davies") in view of U.S. Patent No. 6,791,467 (hereinafter, "Ben-Ze'ev") and further in view of U.S. Patent No. 6,532,592 (hereinafter, "Shintani").

7. Argument

Davies

Figure 1 shows an adaptive remote controller 100 that sends a control signal 110 to a target device 120 so that the target device 120 performs a function. The remote controller 100 may be configured to send the control signal 110 to any number of target devices 120.

As shown in Figure 2, a remote controller 200 comprises a user control input 210, a detector 220, and a user interface 230. The user control input 210 issues a control signal to the target device 120. The detector 220 detects if the remote controller 200 is within the feedback range of the target device 120. The user interface 230 provides feedback to the user as to whether the control signal was successfully sent to and executed by the target device 120, but only if the remote controller 200 is out of the feedback range of the target device 120.

As shown in Figure 3, an alternative remote controller 300 comprises a user control input 310, a detector 320, a user interface 330, as before. The user control input 310 also comprises an infrared system 340, a radio frequency system 350, and a toggling mechanism 360. The infrared system 340 sends a signal to the target device 120 when the remote controller 300 is within the feedback range of the target device 120. The radio frequency system 350 sends radio frequency signals to the target device 120 when the remote controller 300 is not within the feedback range of the target device 120. The detector 320 determines whether the remote controller 310 is within the feedback range of the target device 120 and activates the toggling mechanism 360 to

switch between the infrared system 340 and the radio frequency system 350 as necessary.

An example of an application of the remote controller 300 is a user attempting to turn on a television set. The remote controller 300 transmits an infrared signal to the television set when the user is holding the remote controller 300 in the same room as the television set. Feedback as to the successful execution of a function in response to the transmitted signal is provided by the television set (because the user can see and/or hear the television set).

However, the remote controller 300 transmits a radio frequency signal when the user is in a room that is different than the room where the television set is located. Feedback relevant to the execution of a particular function corresponding to the transmitted signal is received by the remote controller 300 via radio frequency communication and is provided to the user of the remote controller 300.

Ben-Ze'ev

As shown in Figure 1, a master remote controller 1 bi-directionally communicates with a plurality of electrical or electronic appliances such as a first TV 2, a light bulb 3, an oven 4, a kettle 5, a refrigerator 6, a stereo system 7, a stove 8, a second TV 9, and a chandelier 11.

As shown in Figure 2, an additional part that is added to each of these appliances includes a non-directional antenna 21, a receiver 22, a transmitter 26, a small database 24, and a processing unit 23. The small database 24 contains set-up data for a corresponding appliance. This data can be transmitted by the

transmitter 26 to provide the remote controller 1 with all of the information that the remote controller 1 needs in order to control the appliance.

The remote controller 1 periodically interrogates the existence of all appliances in its vicinity. Thus, as shown in Figure 6, the remote controller 1, upon receipt of an identification signal from an appliance indicating its existence, displays a description of that appliance on its screen. If an identification signal from an appliance is not received within a predetermined period, the description of that appliance is removed from the screen. In this fashion, the list of appliances in the vicinity of the user is continuously updated, even when the user moves from one location to another. The user who holds the remote controller 1 can control an appliance by pressing the appropriate description.

The remote controller 1 can also acquire the appliance current status.

Shintani

Figure 1 shows a remote control 100 and a television set 101. Each has a transmitter and a receiver such that signals can be communicated between the remote control 100 and the television set 101 by way of a communications link 102. The television set 101 can send a confirmation signal to the remote control 100 when a valid instruction is received by the television set 101 from the remote control 100. Alternatively, the television set 101 can send an error signal to the remote control 100 when an invalid instruction is received by the television set 101 from the remote control 100.

Rejection

Davies, Ben-Ze'ev, and Shintani fail to disclose or suggest the invention of independent claims 31 and 42 for at least two reasons.

First, Davies, Ben-Ze'ev, and Shintani fail to disclose or suggest plural televisions that transmit confirmation signals indicating that the televisions have modified their operation.

Second, Davies, Ben-Ze'ev, and Shintani fail to disclose or suggest a host processor that determines which televisions do not transmit confirmation signals indicating that they have modified their operation.

The Examiner recognizes that Davies fails to disclose or suggest either (i) plural televisions that transmit confirmation signals indicating that the televisions have modified their operation or (ii) a host processor that determines which televisions do not transmit confirmation signals indicating that they have modified their operation.

Therefore, the Examiner relies on Ben-Ze'ev. Specifically, with regard to failure (i) of Davies, the Examiner characterizes column 9, lines 52-59 and column 10, lines 49-65 of Ben-Ze'ev as disclosures of a remote controller that periodically interrogates the status of remote devices. However true this characterization may be, it is not pertinent to failure (i).

Column 9, lines 52-59 of Ben-Ze'ev describe a general section 44 (see Figure 4) of a set up file 50 that is stored in an appliance (shown in more detail in Figure 2) and that is sent, when necessary, to the remote controller 1. The general section 44 includes information specific to the appliance that may be needed by the remote controller or its operator. For example,

the general section 44 includes the date and time as currently set in the appliance and a status register or file that shows the current status of the appliance. The status register or file in the case of a video tape, for example, may indicate the remaining recording time, the programming times of the videotape, etc.

The set-up file 50 is not, however, transmitted by the appliance to the remote controller as a confirmation indicating that the appliance has modified its operation as commanded by the remote controller. Instead, as disclosed in column 11, lines 21-64 of Ben-Ze'ev, the identification portion of the set-up file 50 is periodically transmitted by the appliance to the remote controller, and the functional portion of the set-up file 50 (which includes the general section 44) is transmitted by the appliance to the remote controller when the user desires to control the appliance but before the user actually transmits a control signal from the remote controller 1 to the appliance.

As further disclosed in column 11, lines 21-64 of Ben-Ze'ev, the remote controller 1 changes the background color of the icon representing the appliance to show that the remote controller 1 has received and stored the general section 44 of the appliance. Thus, this color change informs the user that the appliance can now be controlled.

As can be seen, neither the general section 44 nor any other section of the set-up file 50 is a confirmation indicating that the appliance has modified its operation as commanded by the remote controller. The user consults the general section 44 of an appliance before the remote controller 1 is used to control the appliance.

Column 10, lines 49-65 of Ben-Ze'ev merely state that the remote controller periodically interrogates the existence of appliances within its vicinity. Thus, there is no disclosure or suggestion in this portion of Ben-Ze'ev of a control signal that causes an appliance to modify its operation or of a confirmation signal indicating that an appliance has modified its operation as commanded by the control signal from the remote controller 1.

Further, the Examiner characterizes column 13, lines 44-50 of Ben-Ze'ev as a disclosure that the remote controller receives confirmation that the appliances has executed a commanded function. However true this characterization may be, it is not pertinent to failure (i).

Column 13, lines 44-50 of Ben-Ze'ev merely state that the remote controller 1 receives alert signals from the appliances. These alerts indicate, for example, that a kettle has finished boiling water. However, there is no disclosure or suggestion in Ben-Ze'ev that the alerts are in response to either a commanded function or an interrogation. Therefore, there is no suggestion that the alert signal is a confirmation signal.

Accordingly, as in the case of Davies, Ben-Ze'ev fails to disclose or suggest (i) plural televisions (or any appliances) that transmit confirmation signals indicating that they have modified their operation.

It is also noted that, as in the case of Davies, Ben-Ze'ev fails to disclose or suggest (ii) a host processor that determines which televisions do not transmit confirmation signals indicating that they have modified their operation.

With regard to failure (ii) of Davies (i.e., Davies fails to disclose a host processor that determines which televisions do not transmit confirmation signals indicating that they have modified their operation), the Examiner relies on Shintani. In the final rejection, the Examiner does not cite any specific portion of Shintani as particularly pertinent to the Examiner's argument. However, the Examiner's reliance on Shintani is, in any event, unwarranted.

Shintani describes a television set 101 that either sends a confirmation signal to a remote control 100 when the television set 101 receives a valid instruction from the remote control 100, or sends an error signal to the remote control 100 when the television set 101 receives an invalid instruction from the remote control 100. Neither the confirmation signal nor the error signal indicates that the television set 101 has performed a function commanded by the remote control 100.

Therefore, Shintani fails to disclose or suggest a television that transmits a confirmation signal indicating that the television has modified its operation. As a result, Shintani cannot disclose a host processor that determines which televisions do not transmit confirmation signals indicating that they have modified their operation.

Accordingly, Davies, Ben-Ze'ev, and Shintani fail to disclose or suggest either (i) plural televisions that transmit confirmation signals indicating that they have modified their operation or (ii) a host processor that determines which televisions do not transmit confirmation signals indicating that they have modified their operation.

In the Final rejection, the Examiner asserts that Ben-Ze'ev discloses a system in which a remote controller sends command signals to control appliances and in which the appliances transmit status signals to the remote controller. Apparently, the Examiner is of the opinion that the status signals sent by the appliances to the remote controller are confirmation signals indicating that the appliances have modified their operations as commanded by the command signals.

However, the status signals are not confirmation signals indicating that the appliances have modified their operations as commanded by the command signals. The status signals merely respond to a status interrogating signal. Thus, the status signal indicates receipt of a status interrogating signal but is not a confirmation signal indicating that an appliance has received a command signal from the remote controller or has modified its operation as commanded by the command signal.

Nor does Ben-Ze'ev suggest using the status signal as such a confirmation signal. Instead, as discussed above, Ben-Ze'ev suggests interrogating the status of an appliance by use of the remote controller prior to the user using the remote controller issuing a command to modify the operation of the appliance.

Thus, Ben-Ze'ev does not disclose or suggest configuring the status signal as a confirmation signal that the appliance has modified its operation in response to a command from the remote controller.

In the Advisory Action, the Examiner relies on column 5, lines 47-62 of Ben-Ze'ev for a showing of a confirmation signal indicating that an appliance has changed its operation in response to a command from the

master remote controller 1. This portion of Ben-Ze'ev states that the master remote controller 1 acquires the status section of a set-up file from the appliance by transmitting a status acquiring command to the appliance asking the appliance to transmit its status portion, that the remote controller displays the current status of the appliance as indicated in the status section, that the master remote controller 1 determines the current status of the appliance from the received status section, and that the master remote controller 1 is further provided with indicating and alerting means for informing the user of the master remote controller 1 according to the determining of a received status section.

The Examiner is not explicit about how this portion of Ben-Ze'ev applies to the independent claims of the present application. Appellant will attempt to interpret.

The Examiner seems to be equating Ben-Ze'ev's status acquiring command with the command signal of the independent claims, and the Examiner seems to be equating the response signal containing the status section of the set-up file as the confirmation signal of the independent claims. Then, if appellant is interpreting correctly, Ben-Ze'ev's status acquiring command causes the appliance to modify its operation because the appliance must operate its transmitter to respond to the status acquiring command by transmitting the status section of the appliance's set-up file. Accordingly, if appellant is still interpreting correctly, receipt of the status section of the appliance's set-up file confirms that the appliance performed the command, i.e., the status acquiring command.

As can be seen, this interpretation of Ben-Ze'ev with respect to the rejected independent claims is not appropriate. The rejected independent claims essentially recite receiving a command from a controller, modifying operation in response to the command, and transmitting a confirmation signal to the controller that operation has been modified. By contrast, the above interpretation of Ben-Ze'ev requires the appliance in Ben-Ze'ev to receive a status acquiring command and to transmit back the status section of its set-up file. The operation of the transmitter is the act of transmitting back the status section of the set-up file. Thus, interpreting the term "modify operation of the corresponding television receiver" to mean operating a transmitter to transmit back a signal makes that term in quotes superfluous since transmitting back the status section of the set-up file is the same thing as operating a transmitter to transmit the status section. Because claim terms should not be interpreted as superfluous, the term "modify operation of the corresponding television receiver" must, therefore, mean something more than operating a transmitter. Ben-Ze'ev does not disclose that something more.

Alternatively, the Examiner may simply mean that the status section of a set-up file indicates the current status of an appliance, and that the current status of the appliance can be used as a confirmation that the appliance has performed some function previously commanded by the remote controller 1. However, Ben-Ze'ev simply does not disclose or suggest this use of current status. Indeed, as discussed above, Ben-Ze'ev teaches away from using current status as a confirmation of the execution of past commands because Ben-Ze'ev teaches that

the current status is instead used to determine the efficacy of future commands, not to indicate whether past commands have been performed. Furthermore, Ben-Ze'ev does not disclose any other use, such as determining which appliances have not performed a commanded operation, that would suggest the use of current status as a confirmation.

In the Advisory Action, the Examiner again refers to column 13, lines 44-50 of Ben-Ze'ev, which state that the remote controller 1 can receive alert signals initiated by the appliances and can use the alert signals to provide an alert such as might indicate that a kettle has finished boiling the water. However, there is no disclosure or suggestion in Ben-Ze'ev that alert signals confirm that the kettle modified its operation in response to a command from the remote controller 1.

In the Advisory Action, the Examiner asserts that either the error message or the prompt for additional information in Shintani is a confirmation that the television 101 has not performed a command. However, the error signal in Shintani merely indicates that an invalid instruction signal is received by the television 101 from the remote control 100, and the prompt merely requires additional input. Neither is a confirmation that the television 101 has modified its operation in response to a command. Indeed, there is no disclosure or suggestion in Shintani that, if a valid instruction is received, a confirmation is provided by the television 101.

Therefore, because Davies, Ben-Ze'ev, and Shintani taken alone or in combination do not disclose or suggest plural televisions that return confirmation signals indicating that they have modified their

operation as commanded by a host device, and because Davies, Ben-Ze'ev, and Shintani taken together do not disclose or suggest determining which of the televisions fail to send such a confirmation signal, it would not have been obvious to one of ordinary skill in the art to combine Davies, Ben-Ze'ev, and Shintani so as to produce the inventions of claims 31-47.

Accordingly, claims 31-47 are not unpatentable over Davies in view of Ben-Ze'ev and further in view of Shintani.

8. Claims Appendix

The Appendix containing a copy of the claims involved in this appeal is attached hereto.

9. Evidence Appendix

There is no submitted evidence. Therefore, there is no corresponding appendix.

10. Related Proceeding Appendix

There are no related proceedings. Therefore, there is no corresponding appendix.

11. Conclusion

For the foregoing reasons, reversal of the Final Rejection is respectfully requested.

The Commissioner is hereby authorized to charge Account No. 26 0175 for $500.00 (fee set forth in 37 C.F.R. §41.20(b)(2) and any additional fees which may be required, or to credit any overpayment to Account No. 26 0175.

Respectfully submitted,

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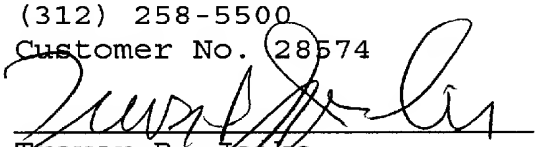
By: 

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CLAIMS APPENDIX

31. A television control system comprising:

a host device having a host processor, a host receiver, and a host transmitter, wherein the host processor controls the host transmitter to transmit command signals, and wherein the host processor processes confirmation signals received by the host receiver;

a plurality of dispersed televisions each having a television processor, a television receiver, and a television transmitter, wherein each television processor processes the command signals received by a corresponding television receiver so as to modify operation of the corresponding television receiver, and wherein each television processor controls a corresponding television transmitter to transmit the confirmation signals indicating that the televisions have modified their operations as commanded by the command signals; and,

wherein the host processor determines which televisions do not transmit the confirmation signals.

32. The television control system of claim 31 wherein each of the command and confirmation signals comprises an infrared signal.

33. The television control system of claim 31 further including at least one peripheral device generating a request signal, wherein the host device is responsive to the request signal.

34. The television control system of claim 33 wherein the peripheral device comprises a video cassette recorder.

35. The television control system of claim 33 wherein the peripheral device comprises a digital video disc player.

36. The television control system of claim 31 wherein the host device comprises a personal computer.

37. The television control system of claim 31 wherein the host device comprises a television remote control unit.

38. The television control system of claim 31 wherein each of the televisions further includes a timer, and wherein the television processor of each of the televisions is responsive to a corresponding one of the timers to cause a corresponding one of the television transmitters to transmit the confirmation signal within about 100 milliseconds to about 500 milliseconds after a function commanded by one of the command signals is performed.

39. The television control system of claim 31 wherein each of the confirmation signals comprises a 1200 baud, 8-bit byte, 1 start bit, 1 stop bit, no parity format packet modulated onto a 40 kHz carrier wave.

40. The television control system of claim 39 wherein the packet includes a command identifier byte, a data value byte, and a checksum byte.

41. The television control system of claim 31 wherein the host processor is arranged to generate an error signal in the event that a confirmation signal is not received by the host receiver from at least one of the televisions.

42. A television signal transmission method comprising:

transmitting a command signal from a host device to each of a plurality of dispersed televisions directing the televisions to perform a function;

receiving at the host device confirmation signals from the plurality of televisions, wherein each of the confirmation signals indicates that a corresponding one of the televisions has modified its operation; and,

determining at the host device which of the televisions fails to transmit a confirmation signal.

43. The television signal transmission method of claim 42 wherein the command signal and the confirmation signals comprise corresponding infrared signals.

44. The television signal transmission method of claim 42 wherein each of the confirmation signals comprises a 1200 baud, 8-bit byte, 1 start bit, 1 stop bit, no parity format packet modulated onto a 40 kHz carrier wave.

45. The television signal transmission method of claim 44 wherein the packet includes a command identifier byte, a data value byte, and a checksum byte.

46. The television signal transmission method of claim 42 wherein the determining at the host device a failure to receive a confirmation signal from one or more of the televisions comprises generating an error signal at the host device in the event that a confirmation signal is not received from one or more of the televisions.

47. The television control system of claim 31 wherein each of the televisions further includes a timer, wherein the television processor of each of the televisions is responsive to a corresponding one of the timers to cause a corresponding one of the television transmitters to transmit a corresponding one of the confirmation signals a corresponding amount of time after a function commanded by one of the command signals is performed, and wherein the host processor uses the times of the confirmation signals to determine which televisions have not transmitted a confirmation signal.